

CLAIMS

1. A method of searching for data to be retrieved from a distributed computer system, the method comprising:
 - generating a search request at a user end terminal comprising at least one search criterion and an identifier for the entity generating the search request at the user end terminal;
 - modifying the search request at a user end terminal to indicate at least one user preference;
 - forwarding the search request to a proxy terminal arranged to forward the search request to a data source capable of retrieving data from the distributed computer system, the data source being capable of providing a search result to a user end terminal selected in accordance with one or more predetermined user preferences.
2. A method as claimed in claim 1, wherein the search results returned by the data source include information specific to the entity generating the search request.
3. A method as claimed in claim 1, wherein the search results returned by the data source include information specific to an entity to whom the at least one search criterion relate.
4. A method as claimed in any one of claims 2 to 3, wherein one of said user preference includes a criterion defining the extent to which a search result must conform to the search request before a search result can be communicated to a user end terminal
5. A method as claimed in claim 4, wherein the search result is forwarded by the data source to the proxy server, and the user preference includes a criterion to indicate that if a search result conforms sufficiently to the search request, then the search result is to be communicated by the proxy server to a predetermined user end terminal.
6. A method as claimed in any previous claim, wherein the search request indicates a priority indicator, and said user preference includes a criterion to indicate that if a

search result is received with said priority indicator then the search result is to be communicated by the proxy server to a predetermined user end terminal.

7. A method as claimed in any previous claim, wherein the search result indicates a content indicator, and said user preference includes a criterion to indicate that if a search result is received with said content indicator, then the search result is to be communicated by the proxy server to a predetermined user end terminal.

8. A method as claimed in claim 7, wherein the content indicator is assigned by the proxy server to indicate a type of file.

9. A method as claimed in claim 8, wherein the content indicator is assigned by the proxy server to indicate a subject content of a file.

10. A method as claimed in any previous claim, wherein the predetermined user end terminal is the user end terminal which the user is associated with at the time the proxy server receives the search result.

11. A method as claimed in any preceding claim, wherein the data source comprises a server and an associated search engine.

12. A method as claimed in any previous claim, wherein the data source comprises one or more email addresses associated with a subject relevant to the search request and the proxy server forwards the search request in the form of an electronic email to the one or more email addresses.

13. A method as claimed in any previous claim, wherein the data source comprises an IP-PSTN gateway, and the proxy server forward the search request by phoning up a telephone number and speaking the search request using automated speech technology.

14. A method as claimed in any preceding claim, in which the search result is provided in a medium and format suitable for the data terminal to which the search result is to be forwarded.

15. A method of searching for data to be retrieved from a distributed computer system, the distributed computer system comprising at least one user end terminal capable of communicating with a proxy server, the proxy server being capable of communicating with at least one data source capable of retrieving information from the distributed computer system, the user end terminal being adapted to be operable by a user who is registered with the proxy server with a unique user identity, the user identity being associated with a set of user preferences, the method comprising the steps of:

generating a search request at one of said at least one user end terminals, the search request indicating at least one search criterion to be met by the data to be retrieved;

sending a search request message encapsulating the search request to the proxy server;

associating the search request message with a unique search number associated with the user's unique identity;

forwarding the search request message to at least one data source arranged to process the received search request message;

performing a search according to the encapsulated search request;

sending a search result encapsulated in a search result message to the proxy server;

de-encapsulating the search result message;

processing the search result according to the set of user preferences;

selecting one of said at least one user end terminals according to the set of user preferences; and

sending an search result message encapsulating the processed search result to said at least one selected user end terminal.

16. A method as claimed in claim 15, wherein the distributed computer system supports the session initiation protocol (SIP), and wherein the user end terminal is a SIP registered terminal, the proxy server is a SIP proxy server, and the user is registered at the proxy server with a unique SIP address.

17. A method as claimed in claim 16, wherein the search result message is a SIP

message which is sent to the user at an address determined by the SIP proxy server to be the current location of the user who requested the search.

18. A method as claimed in claim 17, wherein the search result SIP message is sent to a plurality of addresses associated with the user's registered SIP identity.

19. A method as claimed in claim 16 or claim 17, wherein the search result SIP message is sent to an address associated with a different user end terminal than the user end terminal operated by the user to send the search request to the SIP proxy server.

20. A method as claimed in any preceding claim, wherein the user end terminal is a mobile device.

21. A method as claimed in any preceding claim, wherein at least one user preference comprises a formatting user preference which indicates how the search result should be formatted.

22. A method as claimed in any one of claims 6 to 10, wherein at least one user preference comprises a formatting user preference associated with a type of user end terminal.

23. A method as claimed in any previous claim, wherein the method further comprises the step of the proxy server modifying at least one search criterion in accordance to at least one user preference;

24. A method as claimed in any previous claim, wherein the method further comprises the step of the proxy server modifying the search result according to at least one user preference.

25. A method as claimed in any previous claim, wherein the at least one data source to which said search is forwarded to by the proxy server is determined by the proxy server in accordance with at least one user preference.

26. A method as claimed in any previous claim, wherein the proxy server processes the returned search result to remove at least one result which is indicated by at least one user preference as not relevant to the user's listed interests.
27. A method as claimed in any previous claim, wherein the proxy server processes the returned search result to modify any returned cost value for an item or service indicated by the search result, the modification being according to a discount scheme associated with a user preference.
28. A method as claimed in any previous claim, wherein the proxy server processes the search result to prioritise the delivery of at least one item listed by the search result to the user in accordance with number of search criteria said at least one item conforms with.
29. A method as claimed in claim 28, wherein the proxy server alerts the user to a search result by encapsulating the search result in a small message service SMS message which is sent to the user over a communications network.
30. A method as claimed in any previous claim, wherein the search request is generated by the user end terminal modifying a previously stored search request in accordance with at least one updated search criterion.
31. A method as claimed in any previous claim, wherein the set of at least one user preferences specifies a maximum time limit for the search results to be generated.
32. A method as claimed in any previous claim, wherein the distributed computer system is connected over a communications network.
33. A user end terminal arranged to be operable by a user for use in generating a search request using the method of any of the previous claims.

34. A proxy server arranged to receive a search request message from a user end terminal as claimed in claim 33, the proxy server being arranged to be used in a method according to any of claims 1 to 32.
35. A suite of computer programs arranged to implement a method according to any one of claims 1 to 32, the suite of computers being provided on the distributed computer system.
36. A signal carrying a search request generated by a method according to any one of claims 1 to 32 over a communications network, the communications network comprising the distributed computer system.
37. A signal carrying a search result generated by a method according to any one of claims 1 to 32 over a communications network, the communications network comprising the distributed computer system.
38. A communications network arranged to communicate a signal according to either claim 36 or claim 37.
39. A method as claimed by any one of claims 1 to 32, in which a notification of a search result is sent by the proxy server to an end terminal prior to the search result to which the notification relates.
40. A method as claimed by claim 39, in which following delivery of the notification, the user connects to a high-bandwidth connection than the connection used to receive the notification.
41. A method as claimed in any one of claims 1 to 32, or 39 to 40, further comprising the step of a data source requesting additional information from the proxy server which is enables the data source to provide additional information specific to an entity to which the search criteria relate.
42. A method as claimed in claim 41, in which the addition information is provided by the SIP server.

43. A method as claimed in claim 42, in which the SIP server is authorised to retrieve the additional information from a data source by the user.
44. A method as claimed in claim 43, in which the additional information is provided to the requesting data source without the user being aware of the content of the additional information provided.
45. A method as claimed in any one of claims 41 to 44, in which additional information is provided only if the data source requesting it conforms with predetermined security criteria for receiving the additional information requested.

AMENDED CLAIMS

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original claims 1 and 15 amended; (7 pages)]

1. A method of searching for data to be retrieved from a distributed computer system, the method comprising:

5 generating a search request at a user end terminal, the search request comprising search criteria and a permanent user identifier which can be mapped to an address in the distributed computer system, wherein the search criteria comprise information entered at the end terminal by a user and additional information automatically added to the entered information, the additional information being
10 associated with the user identifier;

forwarding the search request to a proxy terminal arranged to forward the search request to a data source capable of retrieving data satisfying the search request from the distributed computer system, and

15 providing the search result to a user end terminal selected in accordance with one or more user preferences after the initial search session has terminated.

2. A method as claimed in claim 1, wherein the search results returned by the data source include information specific to the entity generating the search request.

20 3. A method as claimed in claim 1, wherein the search results returned by the data source include information specific to an entity to whom the at least one search criterion relate.

25 4. A method as claimed in any one of claims 2 to 3, wherein one of said user preference includes a criterion defining the extent to which a search result must conform to the search request before a search result can be communicated to a user end terminal

30 5. A method as claimed in claim 4, wherein the search result is forwarded by the data source to the proxy server, and the user preference includes a criterion to indicate that if a search result conforms sufficiently to the search request, then the search result is to be communicated by the proxy server to a predetermined user end terminal.

6. A method as claimed in any previous claim, wherein the search request indicates a priority indicator, and said user preference includes a criterion to indicate that if a search result is received with said priority indicator then the search result is to be communicated by the proxy server to a predetermined user end terminal.

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7. A method as claimed in any previous claim, wherein the search result indicates a content indicator, and said user preference includes a criterion to indicate that if a search result is received with said content indicator, then the search result is to be communicated by the proxy server to a predetermined user end terminal.

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8. A method as claimed in claim 7, wherein the content indicator is assigned by the proxy server to indicate a type of file.

9. A method as claimed in claim 8, wherein the content indicator is assigned by the proxy server to indicate a subject content of a file.

15 10. A method as claimed in any previous claim, wherein the predetermined user end terminal is the user end terminal which the user is associated with at the time the proxy server receives the search result.

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11. A method as claimed in any preceding claim, wherein the data source comprises a server and an associated search engine.

25 12. A method as claimed in any previous claim, wherein the data source comprises one or more email addresses associated with a subject relevant to the search request and the proxy server forwards the search request in the form of an electronic email to the one or more email addresses.

30 13. A method as claimed in any previous claim, wherein the data source comprises an IP-PSTN gateway, and the proxy server forward the search request by phoning up a telephone number and speaking the search request using automated speech technology.

14. A method as claimed in any preceding claim, in which the search result is

provided in a medium and format suitable for the data terminal to which the search result is to be forwarded.

15. A method of searching for data to be retrieved from a distributed computer system, the distributed computer system comprising at least one user end terminal capable of communicating with a proxy server, the proxy server being capable of communicating with at least one data source capable of retrieving information from the distributed computer system, the user end terminal being adapted to be operable by a user who is registered with the proxy server with a unique user identity, the user identity being associated with a set of user preferences, the method comprising the steps of:

generating a search request at one of said at least one user end terminals in an initial search session, the search request indicating a plurality of search criteria to be met by the data to be retrieved, the search criteria comprising information the user has entered at the user terminal and additional information derived using the user identity which is automatically included as search criteria;

sending a search request message encapsulating the search request to the proxy server;

associating the search request message with a unique search number associated with the user's unique identity;

20 forwarding the search request message to at least one data source arranged to process the received search request message;

performing a search according to the encapsulated search request;

25 sending a search result encapsulated in a search result message to the proxy server;

de-encapsulating the search result message;

processing the search result according to the set of user preferences;

selecting one of said at least one user end terminals according to the set of user preferences; and

30 sending an search result message encapsulating the processed search result to said at least one selected user end terminal after the initial search session has terminated.

16. A method as claimed in claim 15, wherein the distributed computer system supports the session initiation protocol (SIP), and wherein the user end terminal is a SIP

registered terminal, the proxy server is a SIP proxy server, and the user is registered at the proxy server with a unique SIP address.

17. A method as claimed in claim 16, wherein the search result message is a SIP message which is sent to the user at an address determined by the SIP proxy server to be the current location of the user who requested the search.

5 18. A method as claimed in claim 17, wherein the search result SIP message is sent to a plurality of addresses associated with the user's registered SIP identity.

10 19. A method as claimed in claim 16 or claim 17, wherein the search result SIP message is sent to an address associated with a different user end terminal than the user end terminal operated by the user to send the search request to the SIP proxy server.

15 20. A method as claimed in any preceding claim, wherein the user end terminal is a mobile device.

21. A method as claimed in any preceding claim, wherein at least one user preference comprises a formatting user preference which indicates how the search result should be formatted.

20 22. A method as claimed in any one of claims 6 to 10, wherein at least one user preference comprises a formatting user preference associated with a type of user end terminal.

25 23. A method as claimed in any previous claim, wherein the method further comprises the step of the proxy server modifying at least one search criterion in accordance to at least one user preference;

30 24. A method as claimed in any previous claim, wherein the method further comprises the step of the proxy server modifying the search result according to at least one user preference.

25. A method as claimed in any previous claim, wherein the at least one data source to which said search is forwarded to by the proxy server is determined by the proxy server in accordance with at least one user preference.
- 5 26. A method as claimed in any previous claim, wherein the proxy server processes the returned search result to remove at least one result which is indicated by at least one user preference as not relevant to the user's listed interests.
- 10 27. A method as claimed in any previous claim, wherein the proxy server processes the returned search result to modify any returned cost value for an item or service indicated by the search result, the modification being according to a discount scheme associated with a user preference.
- 15 28. A method as claimed in any previous claim, wherein the proxy server processes the search result to prioritise the delivery of at least one item listed by the search result to the user in accordance with number of search criteria said at least one item conforms with.
- 20 29. A method as claimed in claim 28, wherein the proxy server alerts the user to a search result by encapsulating the search result in a small message service SMS message which is sent to the user over a communications network.
- 25 30. A method as claimed in any previous claim, wherein the search request is generated by the user end terminal modifying a previously stored search request in accordance with at least one updated search criterion.
- 30 31. A method as claimed in any previous claim, wherein the set of at least one user preferences specifies a maximum time limit for the search results to be generated.
32. A method as claimed in any previous claim, wherein the distributed computer system is connected over a communications network.
33. A user end terminal arranged to be operable by a user for use in generating a

search request using the method of any of the previous claims.

34. A proxy server arranged to receive a search request message from a user end terminal as claimed in claim 33, the proxy server being arranged to be used in a method according to any of claims 1 to 32.
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35. A suite of computer programs arranged to implement a method according to any one of claims 1 to 32, the suite of computers being provided on the distributed computer system.
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36. A signal carrying a search request generated by a method according to any one of claims 1 to 32 over a communications network, the communications network comprising the distributed computer system.
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37. A signal carrying a search result generated by a method according to any one of claims 1 to 32 over a communications network, the communications network comprising the distributed computer system.
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38. A communications network arranged to communicate a signal according to either claim 36 or claim 37.
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39. A method as claimed by any one of claims 1 to 32, in which a notification of a search result is sent by the proxy server to an end terminal prior to the search result to which the notification relates.
40. A method as claimed by claim 39, in which following delivery of the notification, the user connects to a high-bandwidth connection than the connection used to receive the notification.
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41. A method as claimed in any one of claims 1 to 32, or 39 to 40, further comprising the step of a data source requesting additional information from the proxy server which is enables the data source to provide additional information specific to an entity to which the search criteria relate.

42. A method as claimed in claim 41, in which the addition information is provided by the SIP server.

5 43. A method as claimed in claim 42, in which the SIP server is authorised to retrieve the additional information from a data source by the user.

10 44. A method a claimed in claim 43, in which the additional information is provided to the requesting data source without the user being aware of the content of the additional information provided.

45. A method as claimed in any one of claims 41 to 44, in which additional information is provided only if the data source requesting it conforms with predetermined security criteria for receiving the additional information requested.